



SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-96724 / January 23, 2023]

Order Making Fiscal Year 2023 Annual Adjustments to Transaction Fee Rates

I. Background

Section 31 of the Securities Exchange Act of 1934 (“Exchange Act”) requires each national securities exchange and national securities association to pay transaction fees to the Commission.¹ Specifically, Section 31(b) requires each national securities exchange to pay to the Commission fees based on the aggregate dollar amount of sales of certain securities (“covered sales”) transacted on the exchange.² Section 31(c) requires each national securities association to pay to the Commission fees based on the aggregate dollar amount of covered sales transacted by or through any member of the association other than on an exchange.³

Section 31 of the Exchange Act requires the Commission to annually adjust the fee rates applicable under Sections 31(b) and (c) to a uniform adjusted rate.⁴ Specifically, the Commission must adjust the fee rates to a uniform adjusted rate that is reasonably likely to produce aggregate fee collections (including assessments on security futures transactions) equal to the regular appropriation to the Commission for the applicable fiscal year.⁵

The Commission is required to publish notice of the new fee rates under Section 31 not later than 30 days after the date on which an Act making a regular appropriation for the

¹ 15 U.S.C. 78ee.

² 15 U.S.C. 78ee(b).

³ 15 U.S.C. 78ee(c).

⁴ In some circumstances, the SEC also must make a mid-year adjustment to the fee rates applicable under Sections 31(b) and (c).

⁵ 15 U.S.C. 78ee(j)(1) (the Commission must adjust the rates under Sections 31(b) and (c) to a “uniform adjusted rate that, when applied to the baseline estimate of the aggregate dollar amount of sales for such fiscal year, is reasonably likely to produce aggregate fee collections under [Section 31] (including assessments collected under [Section 31(d)]) that are equal to the regular appropriation to the Commission by Congress for such fiscal year.”).

applicable fiscal year is enacted.⁶ On December 29, 2022, the President signed into law the Consolidated Appropriations Act, 2023, which includes total appropriations of \$2,209,770,000 to the SEC for fiscal year 2023.

II. Fiscal Year 2023 Annual Adjustment to the Fee Rate

The new fee rate is determined by (1) subtracting the sum of fees estimated to be collected prior to the effective date of the new fee rate⁷ and estimated assessments on security futures transactions to be collected under Section 31(d) of the Exchange Act for all of fiscal year 2023⁸ from an amount equal to the regular appropriation to the Commission for fiscal year 2023, and (2) dividing by the estimated aggregate dollar amount of covered sales for the remainder of the fiscal year following the effective date of the new fee rate.⁹

As noted above, the Consolidated Appropriations Act, 2023, includes total appropriations of \$2,209,770,000 to the Commission for fiscal year 2023.¹⁰ The Commission estimates that it will collect \$1,601,107,658 in fees for the period prior to the effective date of the new fee rate

⁶ 15 U.S.C. 78ee(g).

⁷ The sum of fees to be collected prior to the effective date of the new fee rate is determined by applying the current fee rate to the dollar amount of covered sales prior to the effective date of the new fee rate. The exchanges and FINRA have provided data on the dollar amount of covered sales through November, 2022. To calculate the dollar amount of covered sales from December, 2022 to the effective date of the new fee rate, the Commission is using the same methodology it used in fiscal year 2020. This methodology is described in Appendix A of this order.

⁸ Currently, security futures do not trade on any market, therefore the Commission has not collected any assessments for transactions in security futures. Accordingly, the forecast for the assessments for all of fiscal year 2023 for single stock futures is zero.

⁹ To estimate the aggregate dollar amount of covered sales for the remainder of fiscal year 2023 following the effective date of the new fee rate, the Commission is using the same methodology it used previously. This methodology is described in Appendix A of this order.

¹⁰ The President signed into law the “Consolidated Appropriations Act, 2023” on December 29, 2022. This legislation included an appropriation of \$2,149,000,000 to the SEC for fiscal year 2023 operations. The Act further directed that “[i]n addition to the foregoing appropriation, for move, replication, and related costs associated with a replacement lease for the Commission’s District of Columbia headquarters facilities, not to exceed \$57,405,000, to remain available until expended; and for move, replication, and related costs associated with a replacement lease for the Commission’s San Francisco Regional Office facilities, not to exceed \$3,365,000, to remain available until expended.” The sum of these amounts is \$2,209,770,000. Finally, the Act further directed that “for purposes of calculating the fee rate under section 31(j) ... all amounts appropriated under this heading shall be deemed to be the regular appropriation to the Commission for fiscal year 2023.”

and \$0 in assessments on round turn transactions in security futures products during all of fiscal year 2023. Using the methodology described in Appendix A, the Commission estimates that the aggregate dollar amount of covered sales for the remainder of fiscal year 2023 to be \$76,211,125,379,350.

The uniform adjusted rate is computed by dividing the residual fees to be collected of \$608,662,342 by the estimated aggregate dollar amount of covered sales for the remainder of fiscal year 2023 of \$76,211,125,379,350; this results in a uniform adjusted rate for fiscal year 2023 of \$8.00 per million.¹¹

III. Effective Date of the Uniform Adjusted Rate

Under Section 31(j)(4)(A) of the Exchange Act, the fiscal year 2023 annual adjustments to the fee rates applicable under Sections 31(b) and (c) of the Exchange Act shall take effect on the later of October 1, 2022, or 60 days after the date on which a regular appropriation to the Commission for fiscal year 2023 is enacted.¹² The regular appropriation to the Commission for fiscal year 2023 was enacted on December 29, 2022, and accordingly, the new fee rates applicable under Sections 31(b) and (c) of the Exchange Act will take effect on February 27, 2023.

¹¹ Appendix A shows the process of calculating the fiscal year 2023 annual adjustment and includes the data used by the Commission in making this adjustment.

¹² 15 U.S.C. 78ee(j)(4)(A).

IV. Conclusion

Accordingly, pursuant to Section 31 of the Exchange Act,

IT IS HEREBY ORDERED that the fee rates applicable under Sections 31(b) and (c) of the Exchange Act shall be \$8.00 per \$1,000,000 effective on February 27, 2023.

By the Commission.

J. Matthew DeLesDernier,

Deputy Secretary.

APPENDIX A

This appendix provides the methodology for determining the annual adjustment to the fee rates applicable under Sections 31(b) and (c) of the Exchange Act for fiscal year 2023.

Section 31 of the Exchange Act requires the fee rates to be adjusted so that it is reasonably likely that the Commission will collect aggregate fees equal to its regular appropriation for fiscal year 2023.

To make the adjustment, the Commission must project the aggregate dollar amount of covered sales of securities on the securities exchanges and certain over-the-counter (“OTC”) markets over the course of the year. The fee rate equals the ratio of the Commission’s regular appropriation for fiscal year 2023 (less the sum of fees to be collected during fiscal year 2023 prior to the effective date of the new fee rate and aggregate assessments on security futures transactions during all of fiscal year 2023) to the estimated aggregate dollar amount of covered sales for the remainder of the fiscal year following the effective date of the new fee rate.

For 2023, the Commission has estimated the aggregate dollar amount of covered sales by projecting forward the trend established in the previous decade. More specifically, the dollar amount of covered sales was forecasted for months subsequent to November 2022, the last month for which the Commission has data on the dollar volume of covered sales.¹³

The following sections describe this process in detail.

A. Baseline estimate of the aggregate dollar amount of covered sales for fiscal year 2023

¹³ To determine the availability of data, the Commission compares the date of the appropriation with the date the transaction data are due from the exchanges (10 business days after the end of the month). If the business day following the date of the appropriation is equal to or subsequent to the date the data are due from the exchanges, the Commission uses these data. The appropriation was signed on December 29, 2022. The first business day after this date was December 30, 2022. Data for November were due from the exchanges on December 14, 2022. As a result, the Commission used November 2022 and earlier data to forecast volume for December 2022 and later months.

First, calculate the average daily dollar amount of covered sales (“ADS”) for each month in the sample (February 2012 – November 2022). The monthly total dollar amount of covered sales (exchange plus certain OTC markets) is presented in column C of Table A.

The model forecasts the monthly moving average of the average daily dollar amount of covered sales. Each month’s average daily dollar amount of covered sales is calculated by dividing the total covered sales for that month (column C of Table A) by the number of trading days for that month (column B of Table A). These amounts are shown in column D of Table A. The moving average will span the same number of months required to be forecast for the remainder of the fiscal year. The trailing moving average used in the forecast model is presented in column E of Table A.

To capture the recent trends in the monthly changes in the moving averages, calculate the 1-month and 2-month lags of the trailing moving average shown in column E in Table A. These amounts are shown in columns F and G, respectively, of Table A.

Next, model the monthly trailing moving average of ADS as function of a constant term and the two lagged trailing moving averages using the ordinary least squares technique.

Use the estimated model to forecast the trailing moving average of ADS of the first month after the last available monthly data. Estimate the trailing moving average of the second month using the forecasted value of the first month and the actual value of the month before that. Similarly, estimate the trailing moving average of the third month using the forecasted values of the two previous months. Continue in this fashion until the end of the fiscal year.

The estimate of the trailing moving average ADS for the last applicable month in the fiscal year is a prediction of the moving average for those months that need to be predicted. This estimate is used as the predicted value of ADS for each month in the forecast period; to obtain the forecast total covered sales for each month, multiply the predicted ADS by the number of days in each month.

The following is a more formal (mathematical) description of the procedure:

1. Begin with the monthly data for total dollar volume of covered sales (column C). The sample spans ten years, from February 2012 – November 2022.¹⁴ Divide each month's total dollar volume by the number of trading days in that month (column B) to obtain the average daily dollar volume (ADS, column D).
2. For each month t , calculate the 9-month trailing moving average of ADS (shown in column E). For example, the value for October, 2012 is the average of the 9 months ending in October, 2012, or February 2012 through October 2012 inclusive.
3. Calculate the 1-month and 2-month lags of the trailing moving average. For example, the 1-month lag of the 9-month trailing moving average for November, 2012 is equal to the 9-month trailing moving average for October, 2012. The 2-month lag of the 9-month trailing moving average for December, 2012 is equal to the 9-month trailing moving average for October 2012. These are shown in columns F and G.
4. Estimate the model using ordinary least squares:

$$y_t = \alpha + \beta_1 y_{t-1} + \beta_2 y_{t-2} + u_t$$

Where y_t is the 9-month trailing moving average of the average daily sales for month t , and y_{t-1} and y_{t-2} are the 1-month and 2-month lags of y_t , and u_t representing the error term for month t . The model can be estimated using standard commercially available software. The estimated parameter values are $\mathbf{a} = +2,150,476,361$, $\mathbf{b}_1 = +1.587842$, $\mathbf{b}_2 = -0.590472$. The root-mean squared error (RMSE) of the regression is 8,030,961,258.

5. The predicted value of the 9-month trailing moving average of the last month to be forecast represents the final forecast of covered sales for the entire prediction period. This value is shown in column H. This represents the prediction for August of 2023. To calculate this

¹⁴ Because the model uses a two period lag in the 9-month trailing moving average of average daily covered sales, ten additional months of data are added to the table so that the model is estimated with 120 observations.

value from the model above, one needs the 1-month and 2-month lag of the 9-month trailing moving average ADS, i.e., the 9-month trailing moving average for June and July. The 9-month trailing moving average for July is obtained by using the 1-month and 2-month lags for July, that is, the 9-month trailing moving averages for June and May. To arrive at all the necessary inputs, one begins with the first month to be forecast, in this case, December 2022, and iterates predictions forward until the last month is predicted. One then multiplies the final predicted 9-month trailing moving average ADS by the number of days in each month to arrive at the forecast total dollar amount of covered sales. This is shown in column I.

6. For example, for December 2022, using the **a**, **b₁**, and **b₂** parameter estimates shown above, along with the 1-month and two-month lags in the 9-month trailing moving average ADS (representing the 9-month trailing moving average ADS for October and November 2022, respectively), one can estimate the forecast 9-month trailing moving average ADS for December: $+2,150,476,361 + (1.587842 \times 606,143,338,486) + (-0.590472 \times 627,874,685,327) = 593,867,637,983$.
7. With the estimated 9-month trailing moving average ADS for December 2022 calculated above, one can estimate the 9-month trailing moving average ADS for January, 2023. The estimate obtained from December becomes the 1-month lag for January, and the 1-month lag used in the December forecast becomes the 2-month lag for the January forecast. Thus, the predicted 9-month trailing moving average ADS for January 2023 is calculated as:
 $+2150476361 + (1.587842 \times 593,867,637,983) + (-0.590472 \times 606,143,338,486) = 587,207,522,789$.
8. Using the forecasts for December and January, one can estimate the value for February. Repeat this procedure for subsequent months, until the estimate for August 2023 is obtained.

This value is 586,239,425,995.¹⁵ This value is then used to calculate the final forecast total monthly covered sales for all 9 months from December 2022 through August 2023.

9. To obtain the estimate of total monthly covered sales for each month, multiply the number of trading days in the month, shown in column B in Table A, by the final forecast 9-month trailing moving average ADS, shown in column H of Table A. This product is shown in column I of Table A, and these figures are used to calculate the new fee rate.

B. Using the forecasts from A to calculate the new fee rate

1. Use Table A to estimate fees collected for the period September 1, 2022 through February 26, 2023. The projected aggregate dollar amount of covered sales for this period is \$69,917,364,964,488. Actual and projected fee collections at the current fee rate of \$22.90 per million are \$1,601,107,658.
2. Estimate the amount of assessments on security futures products collected from September 1, 2022 through August 31, 2023. The only entity reporting assessable security futures products ceased operations in September, 2020.¹⁶ Consequently, the estimated amount of assessments on security futures products collected from September 2022 through August 2023 is zero.
3. Subtract the amount \$1,601,107,658 from the target off-setting collection amount set by Congress of \$2,209,770,000, leaving \$608,662,342 to be collected on dollar volume for the period February 27, 2023 through August 31, 2023.
4. Use Table A to estimate dollar volume for the period February 27, 2023 through August 31,

¹⁵ One obtains insignificantly different values using the rounded parameter estimates shown above. The predicted ADS values displayed above represents the full precision estimate.

¹⁶ Currently, security futures do not trade on any market, therefore the Commission has not collected any assessments for transactions in security futures. Accordingly, the forecast for the assessments for all of fiscal year 2023 for single stock futures is zero.

2023. The estimate is \$76,211,125,379,350. Finally, compute the fee rate required to produce the additional \$608,662,342 in revenue. This rate is \$608,662,342 divided by \$76,211,125,379,350 or 0.00000798653.

5. Round the result to the seventh decimal point, yielding a rate of 0.00000800 (or \$8.00 per million).

This table summarizes the estimates of the aggregate dollar amount of covered sales, by time period. The figures in this table can be used to determine the new fee rate.

Table A. Baseline estimate of the aggregate dollar amount of sales.

Fee rate calculation.

a. Baseline estimate of the aggregate dollar amount of sales, 09/01/2022 to 01/31/2023 (\$Millions)	59,951,295
b. Baseline estimate of the aggregate dollar amount of sales, 02/01/2023 to 02/26/2023 (\$Millions)	9,966,070
c. Baseline estimate of the aggregate dollar amount of sales, 02/27/2023 to 02/28/2023 (\$Millions)	1,172,479
d. Baseline estimate of the aggregate dollar amount of sales, 03/01/2023 to 08/31/2023 (\$Millions)	75,038,647
e. Estimated collections in assessments on security futures products in fiscal year 2023 (\$Millions)	0.000
f. Implied fee rate $((\$2,209,770,000 - \$22.90 \times (a+b) - e) / (c+d))$	\$8.00

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Feb-12	20	\$5,011,862,514,132	\$250,593,125,707					
Mar-12	22	\$5,638,847,967,025	\$256,311,271,228					
Apr-12	20	\$5,084,239,396,560	\$254,211,969,828					
May-12	22	\$5,611,638,053,374	\$255,074,456,972					
Jun-12	21	\$5,121,896,896,362	\$243,899,852,208					
Jul-12	21	\$4,567,519,314,374	\$217,500,919,732					
Aug-12	23	\$4,621,597,884,730	\$200,939,038,467					
Sep-12	19	\$4,598,499,962,682	\$242,026,313,825					
Oct-12	21	\$5,095,175,588,310	\$242,627,408,967	\$240,353,817,437				
Nov-12	21	\$4,547,882,974,292	\$216,565,855,919	\$236,573,009,683	\$240,353,817,437			
Dec-12	20	\$4,744,922,754,360	\$237,246,137,718	\$234,454,661,515	\$236,573,009,683	\$240,353,817,437		
Jan-13	21	\$5,079,603,817,496	\$241,885,896,071	\$233,085,097,764	\$234,454,661,515	\$236,573,009,683		
Feb-13	19	\$4,800,663,527,089	\$252,666,501,426	\$232,817,547,148	\$233,085,097,764	\$234,454,661,515		
Mar-13	20	\$4,917,701,839,870	\$245,885,091,993	\$233,038,129,346	\$232,817,547,148	\$233,085,097,764		
Apr-13	22	\$5,451,358,637,079	\$247,789,028,958	\$236,403,474,816	\$233,038,129,346	\$232,817,547,148		
May-13	22	\$5,681,788,831,869	\$258,263,128,721	\$242,772,818,178	\$236,403,474,816	\$233,038,129,346		
Jun-13	20	\$5,623,545,462,226	\$281,177,273,111	\$247,122,924,765	\$242,772,818,178	\$236,403,474,816		
Jul-13	22	\$5,083,861,509,754	\$231,084,614,080	\$245,840,392,000	\$247,122,924,765	\$242,772,818,178		
Aug-13	22	\$4,925,611,193,095	\$223,891,417,868	\$246,654,343,327	\$245,840,392,000	\$247,122,924,765		

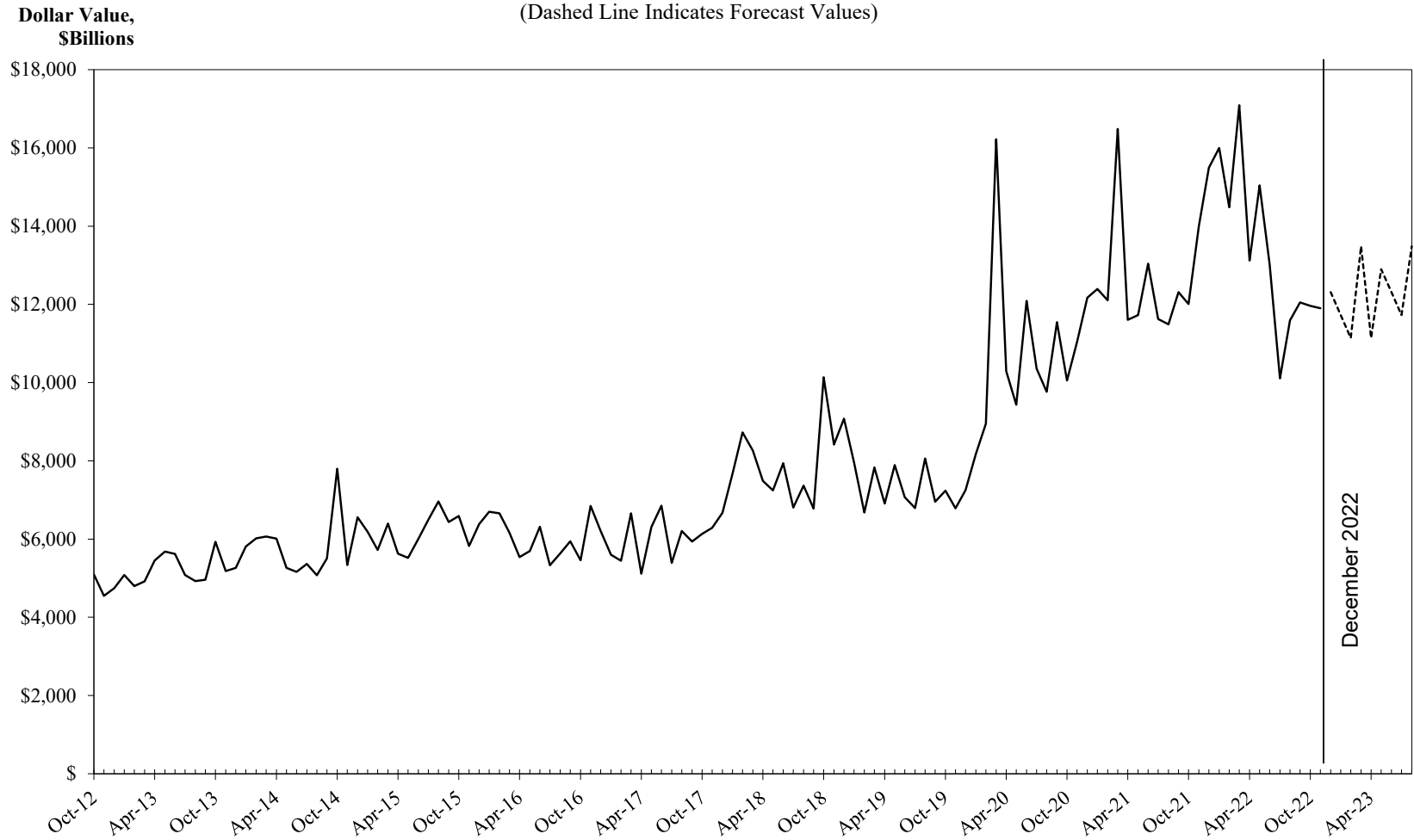
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Sep-13	20	\$4,959,197,626,713	\$247,959,881,336	\$247,844,759,285	\$246,654,343,327	\$245,840,392,000		
Oct-13	23	\$5,928,804,028,970	\$257,774,088,216	\$249,610,113,968	\$247,844,759,285	\$246,654,343,327		
Nov-13	20	\$5,182,024,612,049	\$259,101,230,602	\$250,325,083,876	\$249,610,113,968	\$247,844,759,285		
Dec-13	21	\$5,265,282,994,173	\$250,727,761,627	\$250,863,158,280	\$250,325,083,876	\$249,610,113,968		
Jan-14	21	\$5,808,700,114,288	\$276,604,767,347	\$254,064,906,990	\$250,863,158,280	\$250,325,083,876		
Feb-14	19	\$6,018,926,931,054	\$316,785,627,950	\$260,567,406,904	\$254,064,906,990	\$250,863,158,280		
Mar-14	21	\$6,068,617,342,988	\$288,981,778,238	\$261,434,574,140	\$260,567,406,904	\$254,064,906,990		
Apr-14	21	\$6,013,948,953,528	\$286,378,521,597	\$267,578,341,642	\$261,434,574,140	\$260,567,406,904		
May-14	21	\$5,265,594,447,318	\$250,742,592,729	\$270,561,805,516	\$267,578,341,642	\$261,434,574,140		
Jun-14	21	\$5,159,506,989,669	\$245,690,809,032	\$270,309,686,371	\$270,561,805,516	\$267,578,341,642		
Jul-14	22	\$5,364,099,567,460	\$243,822,707,612	\$268,759,532,970	\$270,309,686,371	\$270,561,805,516		
Aug-14	21	\$5,075,332,147,677	\$241,682,483,223	\$266,824,116,595	\$268,759,532,970	\$270,309,686,371		
Sep-14	21	\$5,507,943,363,243	\$262,283,017,297	\$268,108,033,892	\$266,824,116,595	\$268,759,532,970		
Oct-14	23	\$7,796,638,035,879	\$338,984,262,430	\$275,039,088,901	\$268,108,033,892	\$266,824,116,595		
Nov-14	19	\$5,340,847,027,697	\$281,097,211,984	\$271,073,709,349	\$275,039,088,901	\$268,108,033,892		
Dec-14	22	\$6,559,110,068,128	\$298,141,366,733	\$272,091,441,404	\$271,073,709,349	\$275,039,088,901		
Jan-15	20	\$6,185,619,541,044	\$309,280,977,052	\$274,636,158,677	\$272,091,441,404	\$271,073,709,349		
Feb-15	19	\$5,723,523,235,641	\$301,238,065,034	\$280,246,766,711	\$274,636,158,677	\$272,091,441,404		
Mar-15	22	\$6,395,046,297,249	\$290,683,922,602	\$285,246,001,552	\$280,246,766,711	\$274,636,158,677		
Apr-15	21	\$5,625,548,298,004	\$267,883,252,286	\$287,919,395,405	\$285,246,001,552	\$280,246,766,711		
May-15	20	\$5,521,351,972,386	\$276,067,598,619	\$291,739,963,782	\$287,919,395,405	\$285,246,001,552		
Jun-15	22	\$6,005,521,460,806	\$272,978,248,218	\$292,928,322,773	\$291,739,963,782	\$287,919,395,405		
Jul-15	22	\$6,493,670,315,390	\$295,166,832,518	\$288,059,719,450	\$292,928,322,773	\$291,739,963,782		
Aug-15	21	\$6,963,901,249,270	\$331,614,345,203	\$293,672,734,252	\$288,059,719,450	\$292,928,322,773		
Sep-15	21	\$6,434,496,770,897	\$306,404,608,138	\$294,590,872,186	\$293,672,734,252	\$288,059,719,450		
Oct-15	22	\$6,592,594,708,082	\$299,663,395,822	\$293,522,252,049	\$294,590,872,186	\$293,672,734,252		
Nov-15	20	\$5,822,824,015,945	\$291,141,200,797	\$292,400,378,245	\$293,522,252,049	\$294,590,872,186		
Dec-15	22	\$6,384,337,478,801	\$290,197,158,127	\$292,346,293,303	\$292,400,378,245	\$293,522,252,049		
Jan-16	19	\$6,696,059,796,055	\$352,424,199,792	\$301,739,731,915	\$292,346,293,303	\$292,400,378,245		
Feb-16	20	\$6,659,878,908,747	\$332,993,945,437	\$308,064,881,562	\$301,739,731,915	\$292,346,293,303		
Mar-16	22	\$6,161,943,754,542	\$280,088,352,479	\$308,854,893,146	\$308,064,881,562	\$301,739,731,915		
Apr-16	21	\$5,541,076,988,322	\$263,860,808,968	\$305,376,446,085	\$308,854,893,146	\$308,064,881,562		
May-16	21	\$5,693,520,415,112	\$271,120,019,767	\$298,654,854,370	\$305,376,446,085	\$308,854,893,146		
Jun-16	22	\$6,317,212,852,759	\$287,146,038,762	\$296,515,013,328	\$298,654,854,370	\$305,376,446,085		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Jul-16	20	\$5,331,797,261,269	\$266,589,863,063	\$292,840,176,355	\$296,515,013,328	\$298,654,854,370		
Aug-16	23	\$5,635,976,607,786	\$245,042,461,208	\$287,718,094,178	\$292,840,176,355	\$296,515,013,328		
Sep-16	21	\$5,942,072,286,976	\$282,955,823,189	\$286,913,501,407	\$287,718,094,178	\$292,840,176,355		
Oct-16	21	\$5,460,906,573,682	\$260,043,170,175	\$276,648,942,561	\$286,913,501,407	\$287,718,094,178		
Nov-16	21	\$6,845,287,809,886	\$325,966,086,185	\$275,868,069,311	\$276,648,942,561	\$286,913,501,407		
Dec-16	21	\$6,208,579,880,985	\$295,646,660,999	\$277,596,770,257	\$275,868,069,311	\$276,648,942,561		
Jan-17	20	\$5,598,200,907,603	\$279,910,045,380	\$279,380,018,748	\$277,596,770,257	\$275,868,069,311		
Feb-17	19	\$5,443,426,609,533	\$286,496,137,344	\$281,088,476,256	\$279,380,018,748	\$277,596,770,257		
Mar-17	23	\$6,661,861,914,530	\$289,646,170,197	\$281,366,268,638	\$281,088,476,256	\$279,380,018,748		
Apr-17	19	\$5,116,714,033,499	\$269,300,738,605	\$281,667,477,031	\$281,366,268,638	\$281,088,476,256		
May-17	22	\$6,305,822,460,672	\$286,628,293,667	\$286,288,125,082	\$281,667,477,031	\$281,366,268,638		
Jun-17	22	\$6,854,993,097,601	\$311,590,595,346	\$289,469,766,433	\$286,288,125,082	\$281,667,477,031		
Jul-17	20	\$5,394,333,070,522	\$269,716,653,526	\$290,544,597,917	\$289,469,766,433	\$286,288,125,082		
Aug-17	23	\$6,206,204,906,864	\$269,834,995,951	\$284,307,810,113	\$290,544,597,917	\$289,469,766,433		
Sep-17	20	\$5,939,886,169,525	\$296,994,308,476	\$284,457,548,721	\$284,307,810,113	\$290,544,597,917		
Oct-17	22	\$6,134,529,538,894	\$278,842,251,768	\$284,338,904,987	\$284,457,548,721	\$284,307,810,113		
Nov-17	21	\$6,289,748,560,897	\$299,511,836,233	\$285,785,093,752	\$284,338,904,987	\$284,457,548,721		
Dec-17	20	\$6,672,181,323,001	\$333,609,066,150	\$290,669,859,969	\$285,785,093,752	\$284,338,904,987		
Jan-18	21	\$7,672,288,677,308	\$365,347,079,872	\$301,341,675,665	\$290,669,859,969	\$285,785,093,752		
Feb-18	19	\$8,725,420,462,639	\$459,232,655,928	\$320,519,938,139	\$301,341,675,665	\$290,669,859,969		
Mar-18	21	\$8,264,755,011,030	\$393,559,762,430	\$329,627,623,370	\$320,519,938,139	\$301,341,675,665		
Apr-18	21	\$7,490,308,402,446	\$356,681,352,497	\$339,290,367,701	\$329,627,623,370	\$320,519,938,139		
May-18	22	\$7,242,077,467,361	\$329,185,339,426	\$345,884,850,309	\$339,290,367,701	\$329,627,623,370		
Jun-18	21	\$7,936,783,802,579	\$377,942,085,837	\$354,879,047,793	\$345,884,850,309	\$339,290,367,701		
Jul-18	21	\$6,807,593,326,456	\$324,171,110,784	\$359,915,587,684	\$354,879,047,793	\$345,884,850,309		
Aug-18	23	\$7,363,115,477,823	\$320,135,455,558	\$362,207,100,942	\$359,915,587,684	\$354,879,047,793		
Sep-18	19	\$6,781,988,459,996	\$356,946,761,052	\$364,800,178,154	\$362,207,100,942	\$359,915,587,684		
Oct-18	23	\$10,133,514,482,168	\$440,587,586,181	\$373,160,234,410	\$364,800,178,154	\$362,207,100,942		
Nov-18	21	\$8,414,847,862,204	\$400,707,041,057	\$366,657,388,314	\$373,160,234,410	\$364,800,178,154		
Dec-18	19	\$9,075,221,733,736	\$477,643,249,144	\$375,999,997,948	\$366,657,388,314	\$373,160,234,410		
Jan-19	21	\$7,960,664,643,749	\$379,079,268,750	\$378,488,655,310	\$375,999,997,948	\$366,657,388,314		
Feb-19	19	\$6,676,391,653,247	\$351,389,034,381	\$380,955,732,527	\$378,488,655,310	\$375,999,997,948		
Mar-19	21	\$7,828,979,311,928	\$372,808,538,663	\$380,385,338,397	\$380,955,732,527	\$378,488,655,310		
Apr-19	21	\$6,907,923,076,080	\$328,948,717,909	\$380,916,183,633	\$380,385,338,397	\$380,955,732,527		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
May-19	22	\$7,895,053,976,747	\$358,866,089,852	\$385,219,587,443	\$380,916,183,633	\$380,385,338,397		
Jun-19	20	\$7,070,583,442,058	\$353,529,172,103	\$384,839,855,338	\$385,219,587,443	\$380,916,183,633		
Jul-19	22	\$6,792,811,319,721	\$308,764,150,896	\$370,192,806,973	\$384,839,855,338	\$385,219,587,443		
Aug-19	22	\$8,059,527,400,976	\$366,342,154,590	\$366,374,486,254	\$370,192,806,973	\$384,839,855,338		
Sep-19	20	\$6,958,132,871,506	\$347,906,643,575	\$351,959,307,858	\$366,374,486,254	\$370,192,806,973		
Oct-19	23	\$7,235,982,824,882	\$314,607,948,908	\$344,795,827,875	\$351,959,307,858	\$366,374,486,254		
Nov-19	20	\$6,784,888,230,209	\$339,244,411,510	\$343,446,425,334	\$344,795,827,875	\$351,959,307,858		
Dec-19	21	\$7,252,856,724,647	\$345,374,129,745	\$340,398,157,677	\$343,446,425,334	\$344,795,827,875		
Jan-20	21	\$8,178,172,797,805	\$389,436,799,895	\$347,119,055,675	\$340,398,157,677	\$343,446,425,334		
Feb-20	19	\$8,951,554,790,521	\$471,134,462,659	\$359,593,319,320	\$347,119,055,675	\$340,398,157,677		
Mar-20	22	\$16,218,726,536,159	\$737,214,842,553	\$402,225,060,481	\$359,593,319,320	\$347,119,055,675		
Apr-20	21	\$10,289,596,902,933	\$489,980,804,902	\$422,360,244,260	\$402,225,060,481	\$359,593,319,320		
May-20	20	\$9,435,524,799,540	\$471,776,239,977	\$434,075,142,636	\$422,360,244,260	\$402,225,060,481		
Jun-20	22	\$12,093,857,552,130	\$549,720,797,824	\$456,498,937,553	\$434,075,142,636	\$422,360,244,260		
Jul-20	22	\$10,355,334,352,448	\$470,697,016,020	\$473,842,167,232	\$456,498,937,553	\$434,075,142,636		
Aug-20	21	\$9,763,364,099,611	\$464,922,099,981	\$487,806,354,840	\$473,842,167,232	\$456,498,937,553		
Sep-20	21	\$11,545,564,207,158	\$549,788,771,769	\$510,519,092,842	\$487,806,354,840	\$473,842,167,232		
Oct-20	22	\$10,052,383,314,951	\$456,926,514,316	\$518,017,950,000	\$510,519,092,842	\$487,806,354,840		
Nov-20	20	\$11,039,477,432,965	\$551,973,871,648	\$527,000,106,555	\$518,017,950,000	\$510,519,092,842		
Dec-20	22	\$12,172,302,216,779	\$553,286,464,399	\$506,563,620,093	\$527,000,106,555	\$518,017,950,000		
Jan-21	19	\$12,396,479,814,996	\$652,446,306,052	\$524,615,342,443	\$506,563,620,093	\$527,000,106,555		
Feb-21	19	\$12,103,659,666,497	\$637,034,719,289	\$542,977,395,700	\$524,615,342,443	\$506,563,620,093		
Mar-21	23	\$16,485,012,205,966	\$716,739,661,129	\$561,535,047,178	\$542,977,395,700	\$524,615,342,443		
Apr-21	21	\$11,602,282,119,601	\$552,489,624,743	\$570,623,114,814	\$561,535,047,178	\$542,977,395,700		
May-21	20	\$11,729,455,630,914	\$586,472,781,546	\$584,128,746,099	\$570,623,114,814	\$561,535,047,178		
Jun-21	22	\$13,038,812,281,463	\$592,673,285,521	\$588,893,692,071	\$584,128,746,099	\$570,623,114,814		
Jul-21	21	\$11,623,478,100,180	\$553,498,957,151	\$599,623,963,498	\$588,893,692,071	\$584,128,746,099		
Aug-21	22	\$11,493,350,851,643	\$522,425,038,711	\$596,340,759,838	\$599,623,963,498	\$588,893,692,071		
Sep-21	21	\$12,312,072,157,576	\$586,289,150,361	\$600,007,724,945	\$596,340,759,838	\$599,623,963,498		
Oct-21	21	\$12,011,570,888,110	\$571,979,566,100	\$591,066,976,061	\$600,007,724,945	\$596,340,759,838		
Nov-21	21	\$13,996,377,941,116	\$666,494,187,672	\$594,340,250,326	\$591,066,976,061	\$600,007,724,945		
Dec-21	22	\$15,494,373,840,971	\$704,289,720,044	\$592,956,923,539	\$594,340,250,326	\$591,066,976,061		
Jan-22	20	\$16,002,717,162,409	\$800,135,858,120	\$620,473,171,692	\$592,956,923,539	\$594,340,250,326		
Feb-22	19	\$14,483,452,476,259	\$762,286,972,435	\$640,008,081,791	\$620,473,171,692	\$592,956,923,539		

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
Month	# of Trading Days in Month	Total Dollar Amount of Sales	Average Daily Dollar Amount of Sales (ADS)	9-Month Trailing Moving Average ADS	1 Month Lag of 9-Month Trailing Moving Average ADS	2 Month Lag of 9-Month Trailing Moving Average ADS	Forecast 9-Month Trailing Moving Average ADS	Forecast Total Dollar Amount of Sales
Mar-22	23	\$17,089,275,084,128	\$743,011,960,179	\$656,712,378,975	\$640,008,081,791	\$620,473,171,692		
Apr-22	20	\$13,123,148,685,917	\$656,157,434,296	\$668,118,876,435	\$656,712,378,975	\$640,008,081,791		
May-22	21	\$15,039,352,606,836	\$716,159,647,945	\$689,644,944,128	\$668,118,876,435	\$656,712,378,975		
Jun-22	21	\$13,021,062,095,851	\$620,050,575,993	\$693,396,213,643	\$689,644,944,128	\$668,118,876,435		
Jul-22	20	\$10,112,087,348,637	\$505,604,367,432	\$686,021,191,568	\$693,396,213,643	\$689,644,944,128		
Aug-22	23	\$11,593,039,396,644	\$504,045,191,158	\$667,971,303,067	\$686,021,191,568	\$693,396,213,643		
Sep-22	21	\$12,052,452,021,792	\$573,926,286,752	\$653,486,477,146	\$667,971,303,067	\$686,021,191,568		
Oct-22	21	\$11,962,224,366,908	\$569,629,731,758	\$627,874,685,327	\$653,486,477,146	\$667,971,303,067		
Nov-22	21	\$11,900,801,868,077	\$566,704,850,861	\$606,143,338,486	\$627,874,685,327	\$653,486,477,146		
Dec-22	21				\$606,143,338,486	\$627,874,685,327	\$586,239,425,995	\$12,311,027,945,895
Jan-23	20					\$606,143,338,486	\$586,239,425,995	\$11,724,788,519,900
Feb-23	19						\$586,239,425,995	\$11,138,549,093,905
Mar-23	23						\$586,239,425,995	\$13,483,506,797,885
Apr-23	19						\$586,239,425,995	\$11,138,549,093,905
May-23	22						\$586,239,425,995	\$12,897,267,371,890
Jun-23	21						\$586,239,425,995	\$12,311,027,945,895
Jul-23	20						\$586,239,425,995	\$11,724,788,519,900
Aug-23	23						\$586,239,425,995	\$13,483,506,797,885

Figure A.
 Aggregate Dollar Amount of Sales Subject to Exchange Act Sections 31(b) and 31(c)¹
 Methodology Developed in Consultation With OMB and CBO
 (Dashed Line Indicates Forecast Values)



¹Forecasted line is not smooth because the number of trading days varies by month.